My little techno

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When Raymond Queneau and François Le Lionnais founded *OuLiPo* (*Ouvroir de Littérature Potentielle* meaning 'workshop of potential literature') in 1960, they were looking for 'new ways unknown by our predecessors' (François Le Lionnais, 1962). A technological transfer would appear from mathematics to literature. They would work with constrained writing techniques. Formal constraints would became a powerful stimulus.

Whereas the name of OuLiPo refers to a past well anchored in the XXth century, artists are still using those kind of procedures to experiment new ways of making. It is especially true in the artistic fields which involve the use of modern technologies. By looking at art under restraint, seeing how technologies are involved in the creation process nowadays, and finally thinking about what art is gaining from being restrained by technology, I'll try to ask the question of the relevance of a piece of art focused on its medium.

OuLiPo is of course the most well-known example of art under restraint. George Perec, one of leader of the group, is the author of the longest lipogram ever written : 300 pages without the letter 'e', the most used letter in the french langage. Raymond Queneau, wrote *Cent Mille Milliards de Poèmes (Hundred Thousand Billion Poems)*, thanks to separated strips of poems which the reader can arrange his own way. In the end, the meaning emerging from those little kind of games is naturally random. The author is not really using the expressiveness of the language to detail a personal message. Instead, he relies on self-generated meaning for a more poetical purpose. Between 1916 and 1925, the dadaists also used similar rules to make random poetry.

Before literature, other kind of arts already used restraint as a source of creation. The *Pointillism* movement for example, deriving from the *Impressionism* depended on a technique which only allowed little distinct dot of colours applied in patterns.

In music as well, the *dodecaphonism* from Schoenberg is a perfect example of not having a lot of choice : using all the twelve notes of the chromatic scale, avoiding the music being in a key.

Those choices imply new ways of mastering the medium, preventing automatism from the creator. Constraint is a stimulus. How this stimulus has been exploited thanks to technology in contemporary art ?

Technologies could have been just a means to create works which would require a lot of repetitive tasks, preventing humans from getting bored too quickly. It is more or less what's happening in design applications, where all the functions of one software is aimed at reducing the production time and cutting down tedious labour. In architecture, 3D averts creating complex paper models. In graphic design, the colours, typography and shape can be change easily without altering the final production. It's the same for all other industrial or graphical design fields.

However, since the XXth century, with improvements in electronics and other abilities to walk on the moon, the increasing power of technology that appeared limitless began to fascinate artists. The Futurism painting movement (1909-1939) was a first approach in the loving of new inventions, car, airplanes and the daily life going faster. Technology in itself became a subject, a subject of worship, loathing cult of the past and the nature. After becoming a subject, it became a medium. It is particularly true in music, with the compositions that followed the *IRCAM* creation in 1970. The *IRCAM (Institut de Recherche et Coordination Acoustique/Musique)* is a European institute for science about music and sound and avant garde electro-acoustical art music. In 1974, Francois Bayle created the *Acousmonium*, a sound system arranged on a stage to propose a unique musical experience trough acousmatic music listening. Acousmatic music, part of the *Concrete movement* initiated by Pierre Schaeffer in 1940, designate music composed especially for retransmission trough loudspeakers. Musicians wouldn't need to be present on stage anymore. The people that came to listen those performances didn't go for the composition itself, but more for the new experience offered to them.

The ultimate evolution of the technology, embodied in the computers, led to a going deeper in the core of the electronic love since the late 70's. The demoscene, a big showing off of programming skills running complex graphics in real time on machines that are pushed to their limits, began to get big from the late 80's. The idea is to display the most crazy colours, items and motions without burning the CPU and video card. It has a aesthetic of its own, often associated to the hacker aesthetic, that doesn't fit in any previous model of beauty or formalism. In fact, Demomakers gather during a Demoparty, and the crowd, formed by enthusiastic computers fans, is more concerned about seeing a checkered bouncing ball bouncing as fast as possible (see the *Boing ball*, the first amiga application), that a subtle visual poetry.

The same applies to the *Internet Art* (also referred as *Net Art*), popular in the mid-late 90's. Centred in every visual produced by the internet culture, essentially thanks to amateurs contributions, the Net Art looks like it only talks about itself. All the digital creations, from the introduction *JPEG* that says 'UNDER CONSTRUCTION', to the dancing 3D baby gifs, Russian accordion players, or even shining stars backgrounds, are being re-used or parodied into news forms of visualization. The thematic is the internet, as well as the medium. So the medium has become a subject in itself.

More contemporary examples can be found in the 8-bit music movement. The principle is to produce music with a very limited range of tones. It can be done using lo-fi machines, but can also be achieved through Circuit Bending, a trend where grown up children perform an autopsy on the little CASIO keyboards of their childhood, trying to discover unsuspected new patterns and timbres. In the end it becomes an experimentation around understanding the limitations of the device, to be as creative as possible with the melodies within the physical limitation of the object. It often has this distinctive precise and numeric sound, and from the listener point of view (or point of listening), it reflects an particular affection for a pure and direct sound. Contemporary fans of synthesizers, such as Etienne Jaumet whose last album has been produced by the very famous techno DJ Carl Craig, manipulate all the buttons of their old analog synthesizers to extract some weird atmospheres, adding the effects and trying to pull out surreal sounds. No melody or harmony is developed, just a static state which puts the listener in a standing still ambiance. From all these examples, can we deduce the value added to an Art centered in its medium ?

We can distinguish several kinds of benefits inherent of the use of technological restraint. The first, expressively claimed by the OuLiPo, is to trigger ideas and inspiration. An excess of freedom can create a fear of the infinity, drowning oneself in the void of the unlimited possibilities that are offered to him. In his book *The Fear of Freedom*, Erich Fromm describes humans escaping their freedom's negative effects by creating some forms of securities. The security is the constraint, and the fear of the blank page (or lack of inspiration), is taken care of by the comfort provided by arbitrary boundaries. The author just needs to navigate in the freshly build up playground.

Because constraint is a game. The new rules imposed on the creator is a challenge, an invitation to go further by developing any sort of ingenuity that can bypass the inner limitations of the chosen law. George Perec played with *La Disparition*, and every word permutation which avoid using the letter 'e' becomes a joke, producing a funny text in the end. It's literally a 'play on words'. The constraint is thus entertaining.

But the constraint can be even taken more seriously. Clement Greenberg, an American art critic wrote :

> It quickly emerged that the unique and proper area of competence of each art coincided with all that was unique in the nature of its medium.
> (Greenberg, 1960)

For him, Art could go purely in the medium. It is a 'formalist' point of view. Yet, is a constraint enough to give birth to art ? When using restraint, it gets much more importance than the work itself, and the work is getting its "piece of art" status because we know a restraint has been used and followed. What would think a newcomer that doesn't know anything about computer culture if he watches demo videos ? He probably wouldn't get the point, and at best would live an "unusual" experience. Is the constraint acting as a label, a proof that the artist did involved himself in the creation process ? Is it enough ?

Tired to encounter shallow and meaningless numeric art in the galleries, the artists from Gratin.org try to define some basis to help judging digital art in its manifesto called *Vademecum de l'art numérique* :

> If the description of an artwork looks like the catalog of a computer reseller, check if the artwork contains more than mere fascination for technology [...]. Don't forget that most technologies have nothing revolutionary, especially for the artistic world. [...] the most important is to look, listen and experiment the work
> (Gratin.org, 2003)

But maybe some artists don't even consider their technology-focused art as a restrained. It might as well be some kind of obsession, a love that is so deep that using it is not enough, it shall also be the subject.
In a *Pataphysics Magazine interview*, John Cage said :

> I'm not sure technology changes things that much; it changes them if we are concerned with what the results are. But if we deal with the new technologies as closely as we have dealt with the old ones, then we will come to appearances that aren't superficial.
> (Cage, 1990)

It indeed shouldn't be a matter of using technology or not. The only goal for artist (assuming artist has a goal), is to produce art, while communicating, spending out emotions or ineffable happenings.

In the end, the constraint offered by the use of technology in art can be seen as a creative process, as long as it doesn't fall in a self-centered circle. Human beings are easily impressionable. The latest improvements in technology grew so quick that it's hard to follow, but once we will have a closer understanding of what a computer is, how it has been created, realizing that it doesn't have to be separated from the "real" life, we will be able to imagine a closer interaction, a mutual exchange that could lead to meaningful or useful results. Then the "mere fascination for technology" could be avoided.

List of references

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